

**BEFORE THE
ILLINOIS COMMERCE COMMISSION**

Petition to Modify)	
911 Provider for Jackson County)	
Emergency Telephone System Board,)	Docket No. 13-0669
Jackson County, Illinois)	

PREFILED REBUTTAL TESTIMONY OF
MICHAEL J. RAMSEY

1 **Q: What is your name, title and business address?**

2 A: My name is Michael Ramsey. I am the President and CEO of NG-911, Inc., an
3 Intervenor in this docket. My business address is 815 South Highland,
4 Williamsburg, Iowa 52361.

5 **Q: Did you cause to be filed Direct Testimony in this docket on or about**
6 **January 20, 2014?**

7 A: Yes.

8 **Q: What is the purpose of your Rebuttal Testimony?**

9 A: The purpose of my rebuttal testimony is to respond to the Direct Testimony
10 provided by Staff witnesses, Marci Elliott and Russell W. Murray, as well as
11 AT&T Illinois and AT&T Mobility witness Mark Neinast.

12 **Q: Will you be responding to the Direct Testimony of Matt Johnson?**

13 A: No. Mr. Johnson did not provide any testimony regarding the proposed Jackson
14 County 9-1-1 plan modification.

15 RESPONSE TO DIRECT TESTIMONY OF STAFF WITNESS

16

MARCI ELLIOTT

17 **Q: Did Ms. Elliot request a clarification of the contractual relationship between**
18 **NG-911, Inc. and Jackson County?**

19 A: Yes. At lines 107–113 of her Direct Testimony, Ms. Elliott expressed concern
20 about whether NG-911, Inc.’s Service Provider Agreement (Jackson County
21 Exhibit 11) is an agreement with CSI as a whole or whether it is an agreement
22 with the Petitioner, Jackson County Emergency Telephone System Board
23 (“Jackson County”).

24 **Q: Does the Service Provider Agreement bind NG-911, Inc. and Jackson**
25 **County?**

26 A: Yes. The Service Provider Agreement is severally binding upon CSI and each of
27 the members of CSI that signed the contract, including Jackson County. (See,
28 Exhibit 11, first paragraph and paragraph 28 (confidential)) Consequently, there
29 is a direct contract between NG-911, Inc. and Jackson County independent of the
30 agreement between NG-911, Inc. and CSI and/or the other CSI members.

31 **Q: At lines 115–126 of her Direct Testimony, Ms. Elliott listed three items that**
32 **should be included to clarify the record. Are you providing responsive**
33 **information?**

34 A: The first two items concern the relationship between Jackson County and CSI and
35 Jackson County witness Patrick Lustig can best address those items. The third
36 question Ms. Elliott posed is, if CSI is dissolved or partly dissolved, what would
37 be the relationship between NG-911, Inc. and Jackson County? As indicated
38 above, whether or not CSI exists, NG-911, Inc. would continue to be the 9-1-1
39 Service Provider for Jackson County.

40 **Q: At lines 128–198 of her Direct Testimony, Ms. Elliott expressed concern**
41 **about the connection of Access Carriers either directly or through**

42 **Clearwave, and subsequent Commission review and approval of those**
43 **connections. What is your response?**

44 A: Ms. Elliott is correct about the three options in Jackson County, i.e., connecting
45 through the Frontier FAS, connecting through Clearwave, or connecting directly.
46 As proposed in this filing, all Access Carriers except Clearwave are connecting
47 through the Frontier FAS and to date, no Access Carrier has expressed any
48 interest in a direct connection. The network diagram shows Clearwave
49 connecting to the Jackson County ESInet. We agree that any changes in the
50 connection of Access Carriers in the future will require Jackson County to request
51 Commission approval before those changes can be made. However, it is really up
52 to Jackson County to file for approval of changes to its system.

53 **Q: At lines 200–209 of her Direct Testimony, Ms. Elliott recommended that**
54 **Jackson County provide additional reports to the Commission during the**
55 **cut-over of the system and for a period of time after cut-over. Do you agree?**

56 A: NG-911, Inc. will agree to provide the reports recommended by Ms. Elliott.

57 RESPONSE TO DIRECT TESTIMONY OF STAFF WITNESS

58 RUSSELL W. MURRAY

59 **Q: At lines 126 – 140 of Mr. Murray’s Direct Testimony, he indicated there is a**
60 **potential problem with Clearwave customers in split exchange areas. How**
61 **will Clearwave handle split exchanges?**

62 A: My understanding is that Clearwave will perform 10-digit screening in their
63 Softswitch. This will allow Clearwave on a customer-specific basis to send the
64 calls to the correct 9-1-1 Provider.

65 **Q: If Clearwave directs 9-1-1 calls to another jurisdiction, will ANI/ALI**
66 **information be lost?**

67 A: I don’t know why it would. Clearwave should send the ANI/ALI information for
68 all 9-1-1 calls. During the preliminary testing between NG-911, Inc. and

69 Clearwave through the ESInet, ANI/ALI information was available from
70 Clearwave's switch.

71 **Q: Do you agree with Mr. Murray's contention at lines 153-162 of his Direct**
72 **Testimony that if, in the future, Access Carriers desire to connect directly**
73 **with the NG-911, Inc. Data Centers, a plan modification would need to be**
74 **filed by Jackson County for approval by the Commission?**

75 A: We agree, but it is really up to Jackson County to file for a plan modification. At
76 that time, we will account for the handling of split exchanges in the system
77 design.

78 RESPONSE TO DIRECT TESTIMONY OF AT&T WITNESS

79 MARK NEINAST

80 **Q: Was the discussion of E9-1-1 in Mr. Neinast's testimony (Neinast Direct**
81 **Testimony, lines 102-231) helpful?**

82 A: While interesting from a historical perspective, the testimony is not particularly
83 relevant. For many good reasons, Jackson County is transitioning from an E9-1-1
84 system to a Next Generation 9-1-1 system.

85 **Q: Mr. Neinast asked whether, under the modified plan, interconnection**
86 **between the Access Carriers and NG-911, Inc. will be required and suggested**
87 **the terms of the arrangement are vague. (Neinast Direct Testimony, lines**
88 **247-251) Do you agree?**

89 A: No. Interconnection is not required with the Access Carriers. We are not
90 exchanging traffic with them, as 9-1-1 is a one way service.

91 **Q: Mr. Neinast had several questions about the connection of Access Carriers**
92 **and how the FAS service will work (Neinast Direct Testimony, lines 282-**
93 **302). What do Mr. Neinast's questions indicate to you?**

94 A: Mr. Neinast's questions indicate he has some misunderstandings of the FAS
95 service. The FAS service is a service offered by Frontier to NG-911, Inc. – not
96 AT&T or other Access Carriers. AT&T, like all other Access Carriers who
97 choose to not directly connect to the NG-911, Inc. Data Centers, will remain
98 connected to Frontier just as they are today.

99 In response to Mr. Neinast's specific eight questions:

100 1. How does a carrier order or arrange to use the FAS service?

101 *Answer: Carriers do not have to order or arrange to use the FAS service.*

102 2. What ordering system is used?

103 *Answer: Carriers do not have to order or arrange to use the FAS service.*

104 3. Are there any costs to carriers?

105 *Answer: Not that I know of.*

106 4. How long will the FAS arrangement be available to AT&T?

107 *Answer: As long as AT&T chooses to not directly connect with the NG-*
108 *911, Inc. Data Centers and the FAS agreement between Frontier and NG-*
109 *911, Inc. is in effect.*

110 5. Will the FAS impose new costs on Jackson County?

111 *Answer: Not that I'm aware of.*

112 6. Does Jackson County intend to recover these costs in a way that would
113 impact AT&T?

114 *Answer: I don't know of any new costs to recover.*

115 7. Does Frontier monitor the FAS service as a System Service Provider, a
116 transport provider or as a 9-1-1 aggregator?

117 *Answer: I'm not sure what Mr. Neinast means, but Frontier will be*
118 *aggregating the 9-1-1 traffic and delivering it to the NG-911, Inc. Data*
119 *Centers. Each of the parties to the FAS agreement has a monitoring*
120 *capability. In Exhibit 10.2 the Network Operations Center (NOC)*
121 *information is provided for each party.*

122 8. Is AT&T's use of this arrangement governed by any contract or tariff,
123 with Frontier or NG-911, Inc.? If so, where is that document?

124 *Answer: AT&T Mobility is already connected to Frontier for access in*
125 *Jackson County. For this Jackson County filing, there is no change. The*
126 *FAS service is an agreement between Frontier and NG-911, Inc. A copy*
127 *of the FAS agreement was provided in response to AT&T Data Requests.*

128 **Q: Mr. Neinast raised questions about ordering trunks for direct connection to**
129 **the NG-911, Inc. Data Centers (Neinast Direct Testimony, lines 294–315).**
130 **How do you respond?**

131 A: AT&T specifically declined the invitation to direct connect with the NG-911, Inc.
132 Data Centers. If AT&T ever elects to do so, the Commission Staff has made it
133 clear that a new plan modification would have to be filed. (See, Direct Testimony
134 of Staff Witness Marci Elliott, lines 154–166)

135 **Q: Mr. Neinast suggested that Frontier will be selectively routing 9-1-1 calls for**
136 **split exchanges. (Neinast Direct Testimony, lines 337-339) If the proposed**
137 **plan is approved, will Frontier be selectively routing 9-1-1 calls?**

138 A: Frontier–will continue to selectively route–E9-1-1 calls for ETSBs they serve as
139 the 9-1-1 Service Provider; all other 9-1-1 calls destined for Jackson County will
140 be routed via the FAS. Selective routing is defined in 83 ILCS 725.101 as, “A
141 system that automatically routes calls to predetermined PSAPs, based on the
142 location of the calling telephone number.” With respect to the PSAPs in Jackson
143 County, the function that Frontier is providing via the FAS service does not
144 constitute selective routing; it separates the split exchange calls and delivers the
145 Jackson County calls to the NG-911, Inc. Data Centers where the selective routing
146 occurs. But by itself, the FAS service does not send 9-1-1 calls to the PSAPs in
147 Jackson County. By analogy to the AT&T system described by Mr. Neinast, it's
148 like an End Office identifying a call as a 9-1-1 call and sending it to the AT&T
149 selective router. The End Office is not selectively routing the call, but it is

150 determining the proper network route to reach the selective router. Of course, as
151 stated above, Frontier will continue to selectively route calls for the jurisdictions
152 it serves as the 9-1-1 Service Provider.

153 **Q: Mr. Neinast asked whether Frontier is being paid for performing the**
154 **selective router function? (Neinast Direct Testimony, lines 352-355)**

155 A: Frontier is not providing a selective routing function for Jackson County.

156 **Q: Mr. Neinast asked how calls in split exchanges will be routed in the FAS.**
157 **(Neinast Direct Testimony, lines 355-360) Can you explain?**

158 A: Frontier and NG-911, Inc. will designate the exchanges that are split; Frontier will
159 use their own database first to determine where to send the calls, either to their
160 E9-1-1 PSAPs or to the FAS architecture for delivery to the NG-911, Inc. Data
161 Centers for selective routing to the Jackson County PSAPs.

162 **Q: Are you concerned with the aggregation of 9-1-1 traffic via the FAS service**
163 **by Frontier?**

164 A: I disagree with Mr. Neinast's characterization of the aggregation of 9-1-1 traffic
165 to be provided by Frontier. I see the FAS service as a very positive step. Most
166 Access Carriers indicated to us that they are not prepared to re-design their access
167 trunking without assurances the Commission will support the initiative. We feel
168 confident that once the Commission approves the initial Next Generation
169 implementations in Illinois, the Access Carriers will cooperate. Aggregation
170 moves the application process along and enables the Access Carriers to move in
171 steps toward the IP networks of the future.

172 **Q: Mr. Neinast suggested that the proposed plan to use the FAS will not use**
173 **"dedicated" facilities as required by Commission rules. (Neinast Direct**
174 **Testimony, lines 409-450) What is a "dedicated facility?"**

175 A: As Mr. Neinast testified, 83 ILCS 725.410(b), indicates, "Dedicated redundant
176 facilities should be considered to be the standard method of providing all

177 incoming 9-1-1 facilities and, when possible, employ diverse routing.” It
178 prohibits carriers from sending administrative lines or other non-emergency
179 traffic over the same trunks. On that much, I agree with Mr. Neinast. However,
180 Mr. Neinast added an additional component, i.e., that the transport facilities must
181 be “... only for a single carrier’s traffic.” (Neinast Direct Testimony, line 430.)
182 That is not a requirement of 83 ILCS 725.410(b).

183 **Q: Is it reasonable to require wireless and wireline traffic to be delivered over**
184 **separate trunks? (Neinast Direct Testimony, lines 391–408)**

185 A: We were unable to find anything in the Commission’s rules that requires such an
186 arrangement.

187 **Q: Is there a need to deliver 9-1-1 traffic over separate trunks for each carrier?**

188 A: Again, we were unable to find anything in the Commission’s rules that requires
189 such an arrangement. 9-1-1 traffic from the Access Carriers is delivered to the
190 FAS over separate trunks. Once the non SIP calls hit the FAS service, they are
191 converted to SIP and there is no more concern of a denial of service attack
192 through the non SIP trunk than with the existing legacy access network today.
193 Rather, a heavy call load from one particular carrier will simply tie up the trunks
194 from that carrier. With the non SIP traffic connected to the FAS today, no denial
195 of service attack would bring down the 9-1-1 service. As a further precaution,
196 before the SIP traffic enters the NG-911, Inc. ESInet, it must pass through a
197 Session Border Controller, in effect a sophisticated firewall, which will identify
198 and isolate any denial of service attacks.

199 The most critical potential problem in the present E9-1-1 architecture is the single
200 point of failure at the legacy selective router, which is not solved by separate
201 trunking from the Access Carriers. Direct connection to the two (2) redundant
202 NG-911, Inc. Data Centers would eliminate any single point of failure, but so far,
203 AT&T and others have declined that opportunity. So far, only Clearwave

204 accepted that opportunity; Clearwave has installed two (2) separate diversely
205 routed access trunk groups using SIP to the two (2) diverse NG-911, Inc. Data
206 Centers. If AT&T wishes to work with us on diverse access trunking to the two
207 (2) Data Centers, we have always been open to discussion. We absolutely believe
208 in end-to-end diversity and we believe Next Generation 9-1-1 gives us the
209 pathway. We acknowledge it is unlikely the Access Carriers are going to change
210 out the Host/Remote arrangements until they are ready in the access architecture.
211 Our intention is to encourage diverse access where it is possible and design and
212 use diversity inside the NG-911, Inc. ESInet. We believe the wireless carriers
213 will embrace diversity and the Next Generation 9-1-1 architecture so that newer
214 forms of communications, such as texting, video, and other high speed data
215 platforms, which presently cannot traverse the legacy selective routers, will be
216 able to use the 9-1-1 network.

217 **Q: Mr. Neinast questioned whether the proposed system will accurately handle**
218 **calls in split exchange areas. (Neinast Direct Testimony, lines 453–507) Are**
219 **you satisfied that the proposed plan addresses split exchanges?**

220 **A:** Yes. The Narrative discusses how FAS will handle split exchanges. Most of the
221 split exchanges in Jackson County's example belong to Frontier. The other split
222 exchange is with Egyptian. AT&T's witness may not be familiar with the use of
223 Opt In and Opt Out to simplify split exchanges and understand how a larger
224 network with ESInets talking to ESInets will make the topic obsolete.

225 We believe that aggregation of wireline trunking (via the FAS in the proposed
226 plan) due to split exchanges may be useful in many parts of the country as an
227 initial transition strategy where split exchanges are not easily resolvable by other
228 means. As the geography of Next Generation architecture expands, the concept
229 of split exchanges will become a moot point. Next Generation architecture uses
230 GIS to route calls to PSAPs, not Access Carrier exchange boundaries. Simply

231 put, many Jackson County boundary neighbors plan to convert to Next Generation
232 9-1-1. When they do, the GIS routing will remove the need for split exchange
233 boundary routing. Area Codes split with Williamson, Union, Perry, etc. will be
234 handled in a newer, smarter fashion.

235 Meanwhile, the FAS aggregated trunks have two (2) physically diverse paths to
236 the two (2) geographically diverse Data Centers, eliminating single points of
237 failure inherent in the legacy E9-1-1 network, as described in detail in Mr.
238 Neinast's testimony. Aggregation is a simple, elegant and temporary means to get
239 the 9-1-1 traffic to Jackson County. While landline calls represent less than 10%
240 of all 9-1-1 calls today, they are obviously equally important.

241 **Q: Are AT&T's concern about primary and secondary routers valid?**

242 A: If it makes AT&T more comfortable using old terminology like primary and
243 secondary selective router, then we accept that language. To us, the function of
244 the legacy selective router in the FAS architecture is to sort for split exchanges
245 and to continue as a legacy selective router for Frontier's ETSBs until they
246 convert to the NG9-1-1 ESInet.

247 **Q: Does Jackson County need to address PS/ALI as suggested by Mr. Neinast?**
248 **(Neinast Direct Testimony, lines 510-550)**

249 A: Not at this time. There are no PS/ALI customers in Jackson County directly
250 connected.

251 **Q: What if a customer wants to do PS/ALI?**

252 A: The Next Generation System will accept ISDN PRI and SIP trunking directly
253 from the PS/ALI customer's switch. Updates to PS/ALI records would be sent to
254 the NG-911, Inc. database in standard NENA format via an FTP site. There are
255 many new fields which will help locate the 9-1-1 callers from a PBX. We
256 welcome them.

257 **Q: Mr. Neinast testified that details have been left out about the ALI database.**
258 **(Neinast Direct Testimony, lines 552–572) Have they?**

259 A: No. The Next Generation 9-1-1 GIS database process is well documented in the
260 Plan Narrative. Jackson County will use diverse 911 Datamaster software and
261 servers. 911Datamaster equipment is deployed across the industry, performing
262 Next Generation 9-1-1 database management.

263 **Q: Mr. Neinast questioned whether there is sufficient information provided**
264 **regarding the costs of the trunking, database management, and FAS service**
265 **and the recovery of those costs. (Neinast Direct Testimony, lines 575–590)**
266 **Do you agree?**

267 A: No. The costs to be paid by Jackson County were negotiated over many months
268 and are clearly set forth in Jackson County’s filing. Cost recovery mechanisms
269 will not change as a result of this plan being implemented.

270 **Q: Mr. Neinast concluded by criticizing the proposed plan as being a**
271 **“...collection of different piece parts, with multiple contractor/subcontractor**
272 **relationships.” (Neinast Direct Testimony, lines 592–601) Do you agree with**
273 **him?**

274 A: No. ETSBs already use different vendors for various functions, such as call
275 processing, recording, and CAD, to name a few. The future of Next Generation
276 9-1-1 is dependent upon the integration of “industry-best” components and NG-
277 911, Inc. has proven that it can be an effective integrator of these goods and
278 services.

279 **Q: Does this conclude your Rebuttal Testimony?**

280 A: Yes, it does.